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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,422	03/29/2001	Michael Y. Frankel	345	3665

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EXAMINER

PAYNE, DAVID C

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 12/15/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

# Office Action Summary

Application No.

09/821,422

Applicant(s)

FRANKEL ET AL.

Examiner

David C. Payne

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) ✓
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because drawings contain blank boxes, which are not widely recognized engineering symbols. Applicant must supply a suitable legend. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-15 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Sasaoka et al. US 6,574,404 B2 (Sasaoka).

Regarding claims 1 and 24, Sasaoka disclosed

A dispersion compensation device/method, comprising:

a segment of dispersion compensation fiber (Figure #51); and  
a thermal regulator (Figure 7 #54 #55) coupled to said dispersion compensation fiber, said thermal regulator being configured to adjust a temperature of said segment of dispersion compensating fiber to thereby change a dispersion coefficient function associated with said dispersion compensating fiber (e.g., col./line: 11/10-40).

Regarding claim 2, Sasaoka disclosed  
regulating the dispersion compensation fiber such that the WDM signal has substantially the same dispersion (e.g., col./line: 1/58-67, 2/1-5).

Regarding claim 3, Sasaoka disclosed  
Wherein said dispersion is substantially zero (e.g., col./line: 3/45-50).

Regarding claim 4, Sasaoka disclosed  
wherein said dispersion coefficient function as a non-zero slope (e.g., col./line: 9/20-25).

Regarding claims 5 and 11, Sasaoka disclosed a thermally conductive casing for the DCF (e.g., col./line: 11/20-25).

Regarding claims 6 and 12, Sasaoka disclosed A controller (Figure 7 #55) coupled to and supplying a control signal to said thermal regulator (#500) (e.g., col./line: 11/20-25).

Regarding claims 7 and 13, Sasaoka disclosed maintaining the DCF within a predetermined temperature range (e.g., col./line: 12/40-45).

Regarding claims 8 and 14, Sasaoka disclosed maintaining the DCF within a predetermined temperature (e.g., col./line: 12/10-15).

Regarding claims 9 and 15, Sasaoka disclosed a temperature sensor (Figure 7 #53) coupled to the DCF with input to a controller (Figure 7 #54 and #55).

Regarding claim 10, Sasaoka disclosed a first and second DCF and controller (Figure 8 #231 and #221).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaoka et al. US 6,574,404 B2 (Sasaoka).
- Regarding claim 16, Sasaoka does not disclose a service emitter on a service channel at a wavelength different from all the other wavelengths. However, Sasaoka has disclosed a WDM signal as previously discussed. A service channel as the applicant has defined is nothing more than an intended use of one of the WDM channels already disclosed in Sasaoka and is therefore not considered patentable over the prior art. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of invention that in a system with multiple channels, at least one channel could be reserved for control information, i.e., information other than data so as to simplify distribution of

control for downstream elements.

Regarding claim 17, Sasaoka disclosed a chromatic dispersion measuring element (figure 4 #45) that is a measure of signal quality.

Regarding claim 18, Sasaoka does not disclose a plurality of transmitters. However, Sasaoka disclosed a WDM signal as discussed above. It would have been obvious to one of ordinary skill in the art at the time of invention to use multiple transmitters to transmit a WDM signal since each transmitter can be used to send a unique wavelength.

Regarding claim 19, Sasaoka disclosed  
Wherein said dispersion is substantially zero (e.g., col./line: 3/45-50).

Regarding claim 20, Sasaoka disclosed  
A controller (Figure 7 #55) coupled to and supplying a control signal to said thermal regulator (#500) (e.g., col./line: 11/20-25).

Regarding claim 21, Sasaoka disclosed as claimed  
First circuitry (temperature sensor) (Figure 7 #53),  
Second circuitry (temp. control circuit) and thermal regulator  
(Figure 7 #54 and #55),

Regarding claim 22, Sasaoka disclosed a  
thermally conductive casing for the DCF (e.g., col./line: 11/20-25).

Regarding claim 23, Sasaoka disclosed  
a first and second DCF and controller (Figure 8 #231 and #221).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kinoshita US 6,160,659 and Roberts et al. US 6,313,932 B1 disclosed temperature controlled dispersion compensation systems.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David




C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Dcp

  
JASON CHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600